

**ABSTRACT**

An optical communication apparatus in which bidirectional communication may be made over a sole optical fiber. A light emitting device (132) radiates light through an optical system (133) to an optical fiber (76). The light transmitted from the optical fiber (76) is received over optical system (133) by a light receiving device (136). In the optical system (133), such a relationship  $S - 2QN \geq M > S/2Q - N$  is set, where  $M$  is the light volume of the stray light emitted,  $Q$  is the value of a Q-value representing the communication quality as required,  $S$  is the light volume of a received signal from a communication partner and  $N$  is the sum total of the Gaussian noise.